CLAIMS:

1. A medical apparatus having first and second relatively movable parts, a drive means for causing relative movement therebetween, and control means for controlling the operation of drive means, the control means including a sensor for detecting the relative position of the first and second parts, the control means including at least one of an acceleration control system and a deceleration control system, the acceleration control system having a first acceleration control for operating the drive means in a first acceleration phase in which the relative position is periodically detected and power fed to the drive means is increased using a preset power increase protocol until relative motion between the first and second parts is detected by the sensor, and a second acceleration control for operating the drive means in a second acceleration phase, after the first acceleration phase, in which the relative speed between the first and second parts is accelerated up to a set speed value at a set acceleration rate, and the deceleration control system includes a deceleration control for operating the respective drive means in a deceleration phase in which power fed to the drive means is decreased using a preset power decrease protocol.

2. A medical apparatus according to claim 1 wherein the first acceleration control includes means for setting the initial power fed to the drive means at a pre-selected value, means for operating a feedback control loop in which a signal from the sensor is employed to determine whether there is relative motion between the first and second parts, and means for incrementing the power fed to the drive means by a pre-selected amount if such relative motion is undetected.

3. A medical apparatus according to claim 2 wherein the feedback control loop has a period of about 160 milliseconds.

4. A medical apparatus according to claim 2 or claim 3 wherein the means for incrementing is adapted to increase the power by a first pre-selected fraction of the current power supplied to the drive means.

5. A medical apparatus according to claim 4 wherein the first pre-selected fraction is from 25 to 33% of the current power supplied to the drive means.

6. A medical apparatus according to any foregoing claim wherein in the second acceleration phase the set acceleration rate is linear.

7. A medical apparatus according to any foregoing claim further comprising means for varying at least the set acceleration rate.

8. A medical apparatus according to any foregoing claim wherein the deceleration control is adapted to decrease power fed to the drive means by a second pre-selected fraction of the current power supplied to the drive means.

9. A medical apparatus according to claim 8 wherein the second pre-selected fraction is from 33 to 50% of the current power supplied to the drive means .

10. A medical apparatus according to any foregoing claim which is a surgical table having a patient support member and wherein the first and second parts comprise a lower torso section and an upper torso section of the patient support member.

11. A medical apparatus according to any foregoing claim which is a surgical table having a patient support member mounted at an upper end of a column, the support member having at least two sections along its length, the two sections being relatively movable by a first drive means, and the support member being movable relative to the column by a second drive means, and the control means being adapted to control the operation of at least one of the first and second drive means.

12. A medical apparatus according to claim 10 or claim 11 wherein the first and second parts are mounted with one another by respective first and second gear means disposed on opposite sides of the table, each gear means is coupled with

a respective one of first and second motors for rotating the respective gear means about a common transverse axis, and respective first and second sensors are associated with the first and second gear means and motors, and the control means are adapted to control the operation of the first and second motors so that they rotate the respective gear means through the same angle.

13. A medical apparatus according to claim 12 wherein the control means is adapted whereby the second acceleration phase is only established for each of the first and second motors when both the first and second gear means and motors have been detected as being in motion by the respective sensor of the first and second sensors.

14. A medical apparatus according to any foregoing claim wherein the motor is an electric motor.

15. A method of operating a medical apparatus having first and second relatively movable parts which are relatively movable by a drive means, and a control means for controlling the operation of the drive means, the control means including a sensor for detecting the relative position of the first and second parts, the method comprising at least one of an acceleration phase and a deceleration phase, the acceleration phase comprising the steps of:

(a) operating the drive means in a first acceleration phase in which the relative position is periodically detected and power fed to the drive means is increased using a preset power increase protocol until relative motion between the first and second parts is detected by the sensor; and

(b) operating the drive means in a second acceleration phase, after the first acceleration phase, in which the relative speed between the first and second parts is accelerated up to a set speed value at a set acceleration rate;

and the deceleration phase comprising the step of:

(c) decreasing power fed to the drive means using a preset power decrease protocol.

16. A method according to claim 15 wherein in the first acceleration phase the initial power fed to the drive means is set at a pre-selected value, and a feedback control loop is operated in which a signal from the sensor is employed to determine whether there is relative motion between the first and second parts, and the power fed to the drive means is incremented by a pre-selected amount if such relative motion is undetected.

17. A method according to claim 16 wherein the feedback control loop has a period of about 160 milliseconds.

18. A method according to claim 16 or claim 17 wherein the power is incremented by a first pre-selected fraction of the current power supplied to the drive means.

19. A method according to claim 18 wherein the first pre-selected fraction is from 25 to 33 % of the current power supplied to the drive means.

20. A method according to any one of claims 15 to 19 wherein in the second acceleration phase the set acceleration rate is linear.

21. A method according to any one of claims 15 to 20 wherein at least the set acceleration rate is variable.

22. A method according to any one of claims 15 to 21 further comprising the step of operating the respective drive means in a deceleration phase in which power fed to the respective drive means is decreased using a preset power decrease protocol.

23. A method according to claim 22 wherein the power fed to the respective drive means is decreased by a second pre-selected fraction of the current power supplied to the drive means.

24. A method according to claim 23 wherein the pre-selected fraction is from 33 to 50% of the current power supplied to the drive means .

25. A method according to any one of claims 15 to 24 wherein the medical apparatus is a surgical table having a patient support member and the first and second parts comprise a lower torso section and an upper torso section of the patient support member.

26. A method according to any one of claims 15 to 25 wherein the medical apparatus is a surgical table having a patient support member mounted at an upper end of a column, the support member having at least two sections along its length, the two sections being relatively movable by a first drive means, and the support member being movable relative to the column by a second drive means, and the control means controlling the operation of at least one of the first and second drive means.

27. A method according to claim 25 or claim 26 wherein the first and second parts are mounted with one another by respective first and second gear means disposed on opposite sides of the table, each gear means is coupled with a respective one of first and second drive means for rotating the respective gear means about a common transverse axis, and respective first and second sensors are associated with the first and second gear and drive means, and the control means are adapted to control the operation of the first and second drive means so that they rotate the respective gear means through the same angle.

28. A method according to claim 27 wherein the second acceleration phase is only established for each drive means when both the first and second gear means and drive means have been detected as being in motion by the respective sensor of the first and second sensors.

29. A medical apparatus substantially as hereinbefore described with reference to the accompanying drawings.

30. A method of operating a medical apparatus substantially as hereinbefore described with reference to the accompanying drawings.